

REMARKS

Applicants appreciate the Examiner's thorough consideration provided the present application. Claims 1-28 are now present in the application. Claims 1, 3, 10, 12, 16, 18, 20, 25 and 26 have been amended. Claims 1, 16, 20, 25 and 26 are independent. Reconsideration of this application, as amended, is respectfully requested.

Claim Rejections Under 35 U.S.C. § 103

Claims 1-28 stand rejected under 35 U.S.C. §103(a) as being unpatentable over the Conventional Art disclosed in the present invention (hereinafter "Conventional Art") in view of Troxell, U.S. Patent No. 5,177,406. This rejection is respectfully traversed.

A complete discussion of the Examiner's rejection is set forth in the Office Action, and is not being repeated here.

In light of the foregoing amendments to claims, Applicants respectfully submit that this rejection has been obviated and/or rendered moot. While not conceding to the Examiner's rejection, but merely to expedite prosecution, as the Examiner will note, independent claims 1, 16, 20, 25 and 26 have been amended to address the Examiner's rejection.

Independent claim 1 has been amended to recite "a first driving circuit which receives a first driving voltage and applies a first driving current to the first pixel cell based on the first driving voltage and the first electrical characteristic of the first electro-luminescence diode" and "a second driving circuit which receives a second driving voltage equal to the first driving voltage and applies a second driving current different from the first driving circuit to the second pixel cell based

on the second driving voltage and the second electrical characteristic of the second electro-luminescence diode”.

Independent claim 16 has been amended to recite “the first driving circuit including a first transistor having a first channel width and a first channel length, the first channel width to the first channel length being a first ratio based on first the electrical characteristic of the first electro-luminescence diode” and “the second driving circuit including a second transistor having a second channel width and a second channel length, the second channel width to the second channel length being a second ratio different from the first ratio, the second ratio being based on the second electrical characteristic of the second electro-luminescence diode”.

Independent claim 20 has been amended to recite “forming a driving transistor for each pixel cell based on the electrical characteristic of the electro-luminescence diode of each pixel cell, so that different driving currents from the driving transistors are applied to the pixel cells having different colors for independently driving the pixel cells”.

Independent claim 25 has been amended to recite “forming a first driving circuit which receives a first driving voltage, which includes forming a first transistor having a first channel width and a first channel length, the first channel width to the first channel length being a first ratio based on the first electrical characteristic of the first electro-luminescence diode” and “forming a second driving circuit which receives a second driving voltage equal to the first driving voltage, which includes forming a second transistor having a second channel width and a second channel length, the second channel width to the second channel length being a second ratio different from the first ratio and based on the second electrical characteristic of the second electro-luminescence diode”.

Applicants respectfully submit that the combinations of elements and steps as set forth in amended independent claims 1, 16, 20, 25 and 26 are not disclosed or suggested by the references relied on by the Examiner.

The Examiner has correctly acknowledged that the Conventional Art fails to disclose the first and second driving currents are based on the electrical characteristics of the electro-luminescence diodes of the first and second pixel cells as recited in claims 1, 16, 20, 25 and 26. However, the Examiner alleged that Troxell cures the deficiencies of the Conventional Art. Applicants respectfully disagree.

As presented in the last Amendment filed April 22, 2005, Applicants respectfully submit that Troxell merely discloses a vacuum fluorescent display device, which operates based on a different principle from the electro-luminescence display device and does not include any electro-luminescence diode. Although Troxell discloses changing the channel width of the driving transistor of the vacuum fluorescent display device, this change of the channel width is made based on the characteristics of the pixels of the vacuum fluorescent display device. Troxell nowhere teaches that the change of the channel width is made based on the electrical characteristics of the electro-luminescence diodes of the pixel cells of the electro-luminescence display device. In fact, it is impossible for one skilled in the art based on the characteristics of the pixels of the vacuum fluorescent display device to modify the Conventional Art's electro-luminescence display device to achieve the present invention. Since Troxell's vacuum fluorescent display device does not teach any electro-luminescence diode, it cannot teach using the electrical characteristics of the electro-luminescence diodes of the pixel cells of the electro-luminescence display device to make the necessary changes.

In other words, although Troxell discloses changing the channel width of the driving transistor, Troxell fails to teach changing the channel width of the driving transistor based on the electrical characteristics of the electro-luminescence diodes. Since Troxell does not teach any electro-luminescence diode, the suggestion to modify the Conventional Art in view of Troxell is missing.

Applicants' position is more evident in view of Troxell's disclosure. Troxell discloses that, by changing the channel width of the driving transistor 34, the size of the capacitor 32 has to be changed in order to compensate the total charge storage capacitor of the pixel switch circuit 18 (see col. 10, lines 24-31). When the channel width W is decreased, the size of the capacitor 32 has to be increased (see col. 11, lines 16-38) because of the characteristics of the vacuum fluorescent display device. On the other hand, in the Conventional Art, once the size of the capacitor C is increased, it will increase the voltage V_{GS} of the driving transistor T2 and therefore increase the driving current I based on the formula (1) shown on page 5 of the instant application. However, the purpose of reducing the channel width is to reduce the driving current I. By applying Troxell to the Conventional Art, the decrease of the driving current because of smaller channel width will be compensated by the increase of the driving current due to the higher voltage V_{GS} from the larger capacitor C. Therefore, one skilled in the art would not have the motivation to modify the Conventional Art in view of Troxell's channel width adjustment based on the totally different characteristics of the vacuum fluorescent display device.

Accordingly, since one skilled in the art would not have the motivation to modify the Conventional Art in view of Troxell, Applicants respectfully submit that amended independent claims 1, 16, 20, 25 and 26 clearly define over the teachings of the utilized references.

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In addition, claims 2-15, 17-19, 21-24, 27 and 28 depend, either directly or indirectly, from independent claims 1, 16 and 20, and are therefore allowable based on their respective dependence from independent claims 1, 16 and 20, which are believed to be allowable.

In view of the above remarks, Applicants respectfully submit that claims 1-28 clearly define the present invention over the references relied on by the Examiner. Accordingly, reconsideration and withdrawal of the rejection under 35 U.S.C. § 103 are respectfully requested.

CONCLUSION

All the stated grounds of rejection have been properly traversed and/or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently pending rejections and that they be withdrawn.

It is believed that a full and complete response has been made to the Office Action, and that as such, the Examiner is respectfully requested to send the application to Issue.

In the event there are any matters remaining in this application, the Examiner is invited to contact the undersigned at (703) 205-8000 in the Washington, D.C. area.

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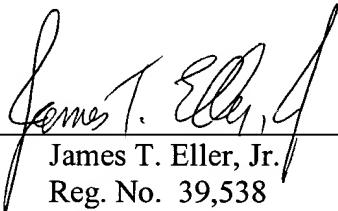
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If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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